AMENDMENTS TO THE CLAIMS

1. **(Currently Amended)** A wireless access system using Carrier Sense Multiple Access for Media Access Control of a host device ~~by~~ using a plurality of terminals, the wireless access system comprising:

a master station for converting ~~an~~ a first downstream electrical signal ~~in a downstream direction inputted~~ received from the host device into ~~an~~ a downstream optical signal and ~~sending out~~ transmitting the downstream optical signal ~~to~~ via an optical fiber transmission line, and for converting an upstream optical signal ~~in an upstream direction inputted~~ received ~~through~~ via the optical fiber transmission line into ~~an~~ a first upstream electrical signal and ~~outputting~~ transmitting the first upstream electrical signal to the host device;

a plurality of slave stations each for converting ~~an~~ a second upstream electrical signal ~~in the upstream direction~~ received from any one of the plurality of terminals in a wireless communications area into ~~an~~ the upstream optical signal and ~~sending out~~ transmitting the upstream optical signal ~~to~~ via the optical fiber transmission line, and for converting ~~an~~ the downstream optical signal ~~in the downstream direction inputted through~~ received via the optical fiber transmission line into ~~an~~ a second downstream electrical signal and ~~sending out~~ transmitting the second downstream electrical signal to the wireless communications area; and

an access control section for transmitting ~~an~~ the downstream optical signal ~~in the downstream direction sent out~~ received from the master ~~station,~~ station to ~~each of~~ the plurality of slave stations ~~through~~ via the optical fiber transmission line, transmitting ~~an~~ the upstream optical signal ~~in the upstream direction sent out~~ transmitted from the any one of the plurality of slave ~~stations,~~ stations to the master station ~~through~~ via the optical fiber transmission line, and notifying all other slave stations of the plurality of slave stations that the any one of the plurality of slave stations has ~~outputted~~ transmitted the upstream optical signal ~~in the upstream direction~~.

2. **(Currently Amended)** The wireless access system according to claim 1, wherein the access control section comprises an optical multiplexing/demultiplexing section for allowing ~~an~~ the downstream optical signal ~~in the downstream direction sent out~~ from the master station to be demultiplexed and transmitting ~~the~~ a plurality of demultiplexed optical signals to the plurality

of slave stations, and for allowing the upstream optical signal ~~in the upstream direction sent out~~ transmitted from the any one of the plurality of slave stations to be demultiplexed and transmitting ~~the~~ a plurality of demultiplexed optical signals to the master station and the all other slave stations of the plurality of slave stations.

3. **(Currently Amended)** The wireless access system according to claim ~~1~~2, wherein the ~~access control section comprises an~~ optical multiplexing/demultiplexing section ~~for allowing an optical signal in the downstream direction sent out from the master station to be demultiplexed and transmitting the demultiplexed optical signals to the plurality of slave stations, and for allowing~~ returns the upstream optical signal ~~in the upstream direction sent out~~ transmitted from the one of the plurality of slave stations back to the one of the plurality of slave stations~~to be demultiplexed and transmitting the demultiplexed optical signals to the master station and the plurality of slave stations~~.

4. **(Currently Amended)** The wireless access system according to claim 1, wherein

the access control section comprises an optical multiplexing/demultiplexing section for allowing ~~an~~ the downstream optical signal ~~in the downstream direction sent out~~ transmitted from the master station to be demultiplexed and transmitting ~~the~~ a plurality of demultiplexed optical signals to the plurality of slave stations, and ~~for~~ outputting ~~an~~ the upstream optical signal ~~in the upstream direction sent out~~ transmitted from the one of the plurality of slave stations to the master station, and

the master station generates a superimposed optical signal by ~~superimposes~~ superimposing the upstream optical signal ~~in the upstream direction sent out~~ transmitted from the one of the plurality of slave stations onto ~~an~~ the downstream optical signal, ~~in the downstream direction~~ and returns the superimposed optical signal back to the optical multiplexing/demultiplexing section.

5. **(Currently Amended)** The wireless access system according to claim 1, wherein

the access control section comprises an optical multiplexing/demultiplexing section for allowing ~~an~~ the downstream optical signal ~~in the downstream direction sent out~~ received from

the master station to be demultiplexed and transmitting ~~the~~ a plurality of demultiplexed optical signals to the plurality of slave stations, and ~~for outputting~~ transmitting ~~an~~ the upstream optical signal ~~in the upstream direction sent out~~ from the one of the plurality of slave stations to the master station, and

any one of the plurality of terminals transmits a Request-to-Send packet to the host device via the one of the plurality of slave stations and the optical multiplexing/demultiplexing section, and the host device transmits a Clear-to-Send packet to the plurality of slave stations via the optical multiplexing/demultiplexing section, the Clear-to-Send packet being a response to the Request-to-Send packet.

6. **(Currently Amended)** The wireless access system according to claim 5, wherein the Clear-to-Send packet includes at least information ~~about~~ authorizing the one of the plurality of terminals to start transmission and information ~~about~~ allowing all other terminals of the plurality of terminals to stop transmission for a predetermined period of time.

7. **(Currently Amended)** The wireless access system according to claim 2, wherein the optical multiplexing/demultiplexing section is an omnidirectional distribution optical multiplexer/demultiplexer including at least an optical port connected to the master station and a plurality of optical ports connected to the plurality of slave stations, respectively, and having formed therein an optical transmission path through which an optical signal ~~inputted~~ transmitted to any one of the optical ports is ~~outputted~~ transmitted to all other optical ports of the plurality of optical ports.

8. **(Currently Amended)** The wireless access system according to claim 3, wherein the optical multiplexing/demultiplexing section is a loopback optical coupler including at least an optical port connected to the master station, a plurality of optical ports connected to the plurality of slave ~~stations,~~ stations respectively, and two optical ports connected to each other by a loop and having formed therein an optical transmission path through which an optical signal inputted to any one of the optical ports from any one of the plurality of slave stations is outputted to the

plurality of slave stations through the two optical ports connected to each other by a loop.

9. **(Currently Amended)** The wireless access system according to claim 3, wherein the optical multiplexing/demultiplexing section is a reflection optical coupler including at least an optical port connected to the master station, a plurality of optical ports connected to the plurality of slave ~~stations,~~ stations respectively, and one optical port processed to be light reflective and having formed therein an optical transmission path through which an optical signal inputted to any one of the optical ports from any one of the plurality of slave stations is ~~outputted~~ transmitted to the plurality of slave stations through the one optical port processed to be light reflective.

10. **(Currently Amended)** The wireless access system according to claim 7, wherein the optical multiplexing/demultiplexing section is ~~composed of~~ comprises a combination of a plurality of optical multiplexing/demultiplexing units each including three optical ports and having formed therein an optical transmission path through which an optical signal inputted to any one of the three optical ports is outputted to all other optical ports.

11. **(Currently Amended)** The wireless access system according to claim 7, wherein the optical multiplexing/demultiplexing section ~~is formed of~~ comprises a plurality of optical couplers.

12. **(Currently Amended)** The wireless access system according to claim 10, wherein the optical multiplexing/demultiplexing unit ~~is formed of~~ comprises a plurality of optical couplers.

13. **(Currently Amended)** The wireless access system according to claim 7, wherein the optical multiplexing/demultiplexing section ~~is formed of~~ comprises an optical waveguide.

14. **(Currently Amended)** The wireless access system according to claim 10, wherein

the optical multiplexing/demultiplexing unit ~~is formed of~~ comprises an optical waveguide.

15. **(Currently Amended)** The wireless access system according to claim 3, wherein the one of the plurality of slave stations cancels its own upstream optical ~~signal in the upstream direction~~ which has been returned back thereto from the optical multiplexing/demultiplexing section.

16. **(Currently Amended)** The wireless access system according to claim 4, wherein the one of the plurality of slave stations cancels its own upstream optical signal ~~in the upstream direction~~ which has been returned back thereto from the optical multiplexing/demultiplexing section.

17. **(Currently Amended)** The wireless access system according to claim 1, wherein the master station comprises:

a first high-frequency amplification section for amplifying the first downstream electrical signal ~~in the downstream direction inputted~~ received from the host device;

an optical reception section for converting the upstream optical signal ~~in the upstream direction~~ received from the access control section into ~~an~~ the first upstream electrical signal;

an optical transmission section for converting the first downstream electrical signal amplified by the first high-frequency amplification section into ~~an~~ first downstream optical signal; and

a second high-frequency amplification section for amplifying the first upstream electrical signal converted by the optical reception section.

18. **(Currently Amended)** The wireless access system according to claim 4, wherein the master station comprises:

a first high-frequency amplification section for amplifying the first downstream electrical signal ~~in the downstream direction inputted~~ received from the host device;

an optical reception section for converting the upstream optical signal ~~in the upstream direction~~ received from the access control section into ~~an~~ first upstream electrical signal;

a multiplexing section for allowing the first upstream electrical signal converted by the optical reception section and the first downstream electrical signal amplified by the first high-frequency amplification section to be multiplexed together;

an optical transmission section for converting ~~the~~ a multiplexed electrical ~~signals~~ signal multiplexed by the multiplexing section into an optical signal; and

a second high-frequency amplification section for amplifying the first upstream electrical signal converted by the optical reception section.

19. **(Currently Amended)** The wireless access system according to claim 17, wherein the master station further comprises:

a transmitted/received signal multiplexing/separation section for allowing the first downstream electrical signal ~~in the downstream direction inputted~~ transmitted to the first high-frequency amplification section and ~~an~~ the first upstream electrical signal ~~in the upstream direction outputted~~ transmitted from the second high-frequency amplification section to be multiplexed together onto ~~one~~ a transmission line.

20. **(Currently Amended)** The wireless access system according to claim 17, wherein the master station further comprises:

an optical signal multiplexing/separation section for allowing the downstream optical signal ~~in the downstream direction~~ transmitted from the optical transmission section and the upstream optical signal ~~in the upstream direction~~ received by the optical reception section to be multiplexed together onto ~~one~~ the optical fiber transmission line.

21. **(Currently Amended)** The wireless access system according to claim 1, wherein the slave stations each comprise:

an optical reception section for converting the downstream optical signal ~~in the downstream direction~~ received from the access control section into ~~an~~ the second downstream electrical signal;

a first high-frequency amplification section for amplifying ~~an~~ the second upstream electrical

signal ~~in the upstream direction~~ received from the any one of the plurality of terminals;

a second high-frequency amplification section for amplifying the second downstream electrical signal converted by the optical reception section; and

an optical transmission section for converting the second upstream electrical signal amplified by the first high-frequency amplification section into ~~an~~ the upstream optical signal.

22. **(Currently Amended)** The wireless access system according to claim 15, wherein the slave stations each comprise:

an optical reception section for converting the downstream optical signal ~~in the downstream direction~~ received from the access control section into ~~an~~ the second downstream electrical signal;

a first high-frequency amplification section for amplifying ~~an~~ the second upstream electrical signal ~~in the upstream direction~~ received from the any one of the plurality of terminals;

a phase inversion section for inverting a phase of the second upstream electrical signal amplified by the first high-frequency amplification section;

a delay section for imparting a predetermined amount of delay to the second upstream electrical signal whose phase has been inverted by the phase inversion section;

a multiplexing section for allowing the second downstream electrical signal converted by the optical reception section and ~~the~~ an electrical signal delayed by the delay section to be multiplexed together;

a second high-frequency amplification section for amplifying ~~the~~ a multiplexed electrical ~~signals~~ signal multiplexed by the multiplexing section; and

an optical transmission section for converting the second upstream electrical signal amplified by the first high-frequency amplification section into ~~an~~ the upstream optical signal.

23. **(Currently Amended)** The wireless access system according to claim 16, wherein the slave stations each comprise:

an optical reception section for converting the downstream optical signal ~~in the downstream direction~~ received from the access control section into ~~an~~ the second downstream

electrical signal;

a first high-frequency amplification section for amplifying ~~an~~ the second upstream electrical signal ~~in the upstream direction~~ received from the any one of the plurality of terminals;

a phase inversion section for inverting a phase of the second upstream electrical signal amplified by the first high-frequency amplification section;

a delay section for imparting a predetermined amount of delay to the second upstream electrical signal whose phase has been inverted by the phase inversion section;

a multiplexing section for allowing the second downstream electrical signal converted by the optical reception section and ~~the~~ an electrical signal delayed by the delay section to be multiplexed together;

a second high-frequency amplification section for amplifying ~~the~~ a multiplexed electrical ~~signals~~ signal multiplexed by the multiplexing section; and

an optical transmission section for converting the second upstream electrical signal amplified by the first high-frequency amplification section into ~~an~~ upstream optical signal.

24. **(Currently Amended)** The wireless access system according to claim 21, wherein the plurality of slave stations each further comprise an optical signal multiplexing/separation section for allowing ~~an~~ the upstream optical signal ~~in the upstream direction~~ transmitted from the optical transmission section and the downstream optical signal ~~in the downstream direction~~ received by the optical reception section to be multiplexed together onto ~~one~~ the optical fiber transmission line.

25. **(Currently Amended)** The wireless access system according to claim 21, wherein the plurality of slave stations each further comprise a transmitted/received signal multiplexing/separation section for allowing the second upstream electrical signal ~~in the upstream direction inputted~~ received by ~~to~~ the first high-frequency amplification section and ~~an~~ the second downstream electrical signal ~~in the downstream direction outputted~~ transmitted from the second high-frequency amplification section to be multiplexed together onto a wireless transmission line ~~by means of~~ via one antenna.

26. **(Original)** The wireless access system according to claim 20, wherein the optical signal multiplexing/separation section performs wavelength division multiplexing.

27. **(Original)** The wireless access system according to claim 24, wherein the optical signal multiplexing/separation section performs wavelength division multiplexing.

28. **(Currently Amended)** A wireless access method ~~performed by~~ for a system using Carrier Sense Multiple Access for Media Access Control of a host device ~~by~~ via a plurality of terminals, the method comprising:

connecting the host device and the plurality of terminals via a master station, an access control section and a plurality of slave stations;

~~transmitting a signal in a downstream direction outputted from the host device, to the plurality of slave stations from the master station through a predetermined transmission line; and~~

~~transmitting a signal in an upstream direction received by a specific slave station from any one of the terminals in a wireless communications area, to the master station and other slave stations through the predetermined transmission line~~

converting in the master station a first downstream electrical signal received from the host device into a downstream optical signal, and transmitting the downstream optical signal to the access control section through an optical fiber transmission line;

transmitting via an access control section the downstream optical signal received from the master station to the plurality of slave stations through the optical fiber transmission line;

converting in the plurality of slave stations the downstream optical signal received from the access control section into a second downstream electrical signal, and transmitting the second downstream electrical signal to a wireless communications area;

converting in the plurality of slave stations a first upstream electrical signal received from any one of the plurality of terminals in the wireless communications area into an upstream optical signal and transmitting the upstream optical signal to the access control section through

the optical fiber transmission line;

transmitting via the access control section the upstream optical signal received from the any one of the plurality of slave stations to the master station through the optical fiber transmission line, and notifying all other slave stations of the plurality of slave stations that the one of the plurality of slave stations has outputted the upstream optical signal; and

converting the upstream optical signal received from the access control section into a second upstream electrical signal, and transmitting the second upstream electrical signal to the host device through the optical fiber transmission line.